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EC942 Secrets in Biscuit Dough

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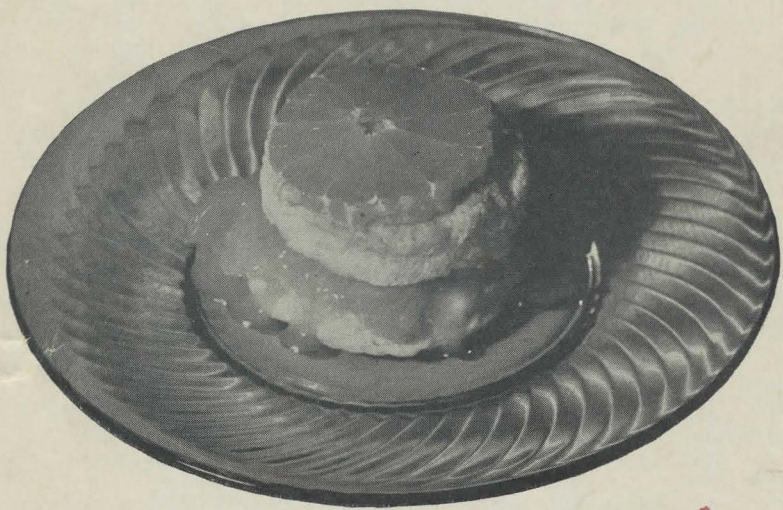
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Secrets in Biscuit Dough



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W. H. Brokaw, Director, Lincoln

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Secrets in Biscuit Dough

BY FLORENCE J. ATWOOD

Is there anything that tastes better for breakfast, lunch, or supper than luscious hot biscuits? Is there anything that is met with greater delight at an afternoon refreshment? With a little planning, biscuits are easily and quickly prepared, and the cost is low. With little work biscuits may be varied in almost an unlimited number of ways. They may be prepared to serve with any part of the meal. They also lend themselves to the use of many home grown products.

Nebraska ranks third of all states in wheat production in addition to producing many other food products for the farm family. It is possible to live almost entirely from the grains, fruits, vegetables, and live stock products of the farm. How fortunate Nebraska homemakers are to have the opportunity to prepare meals for their families with home grown products!

Because biscuits can be made in so short a time, the average housewife takes advantage of the opportunity to serve them frequently in some form, since they always have an appetizing appeal. They are practical in warm weather as well as cold weather because they are quickly mixed and quickly baked when one has acquired the "knack" of making them.

There is a prevalent opinion that hot breads are difficult to digest. This is not necessarily true. However, if mastication is not thoro and the breads are swallowed in heavy masses, the digestive juices will have difficulty in penetrating the food and digestion is naturally hindered. Biscuits properly mixed and thoroly baked are light, porous, and crusty. Such biscuits may be easily masticated and if eaten in moderation, they can be safely included in the normal person's diet.

CHARACTERISTICS OF GOOD BISCUITS

A good biscuit is symmetrical in shape, has vertical sides, a level and fairly smooth top, and is covered with a tender, golden brown crust. The inside is light, fluffy, flaky, creamy white, free from yellow or brown spots, and the small holes are evenly distributed. Biscuits when baked should be approximately twice the size of the unbaked ones.

MANIPULATION OF THE DOUGH

Biscuits are simple to make, yet this simplicity requires care in mixing and handling if the desired results are secured. It is most important to get just the right proportion of liquid and flour which will give a soft dough that is easily handled. A good biscuit dough is light and soft but not sticky. Since the water absorbing power of flour varies, no one definite amount

of liquid can be given to meet all conditions. This accounts for the different results which occur when changing from one brand of flour to another.

When the liquid and dry ingredients are combined they are stirred and kneaded just enough to combine thoroly. It is important to stir enough, otherwise the biscuits will not be as symmetrical in shape and they will be crumbly instead of flaky. However, if they are stirred too much they will be tough. Some kneading is necessary so as to insure a more thoro combination of the ingredients, which helps to give the biscuits a fine texture.

ESSENTIAL INGREDIENTS

Flours.—There are three kinds of wheat flour, namely, bread, pastry, and all purpose. Bread or hard wheat flour is usually made from spring wheat and contains a superior quality of gluten which is especially desirable in making yeast breads. The gluten is the elastic substance which entangles the gas bubbles from the baking powder and causes the dough to rise.

Pastry or soft wheat flour is usually made from winter wheat and contains more starch and less gluten than hard wheat flour.

All purpose flour is a mixture or blend of soft and hard wheat ground into flour. Bread and all purpose flour require approximately one tablespoon of liquid more per cup than pastry flour or about two tablespoons less flour to a cup.

Prepared biscuit flours are on the market and are used by a few homemakers. This flour contains all of the ingredients needed except the liquid which is added when the flour is used. This method is convenient and may save some time, but it means expensive biscuits. Then, too, the flour must be kept in a cool place so that the fat which is mixed in the flour does not deteriorate.

Baking Powders.—Baking powder is a leavening agent which is used to make mixtures light and appetizing. Three general types of baking powders are found on the market. Each contains bicarbonate of soda (baking soda), an acid ingredient (cream of tartar, tartaric acid, phosphate of calcium, or sodium aluminum sulphate), and a filler (starch). Each powder is named according to its acid-reacting component. Some baking powders have a combination of two acid ingredients. The soda furnishes the carbon dioxide which leavens the dough. The acid reacts with the soda and makes it give up its carbon dioxide. The starch acts as a dehydrating agent, which prevents action of the powder in the can and thereby improves the keeping qualities.

All types of baking powders liberate approximately the same total volume of carbon dioxide, but differ considerably in the amount of gas formed in the cold before being heated in the oven. Experiments have shown that tartrate powders liberate much gas in doughs before being heated, those powders containing sodium aluminum sulphate liberate very little, while the straight phosphate baking powder falls between these two. Different types of baking powders cannot be used interchangeably without varying the amount because of this difference in the rate of reaction in the cold.

There is a different residue in the baked products from each type of baking powder. Each residue has a flavor which affects the palatability of the product according to the taste of the consumer. However, these tastes are not noticed in the baked products unless excessive amounts of baking powder have been used. Since taste is decidedly a personal factor, it follows that the desirability of any baking powder from the point of view of taste must be left to the individual. For a considerable period of time, there have been controversies in regard to the physiological effect of these different residues. Since there is so small an amount of any residue from baking powders taken into the body through baked products, there is no possibility that this will be harmful to the health of anyone.

When sour cream, sour milk, or buttermilk is used, some soda is added to the dry ingredients. Only enough is used to sweeten or counteract the acid in the sour milk or cream which is one-half teaspoonful to each cup of sour milk used.

Difference in compactness of the three types of baking powders accounts for the difference in size of cans in which

TYPES OF BAKING POWDER

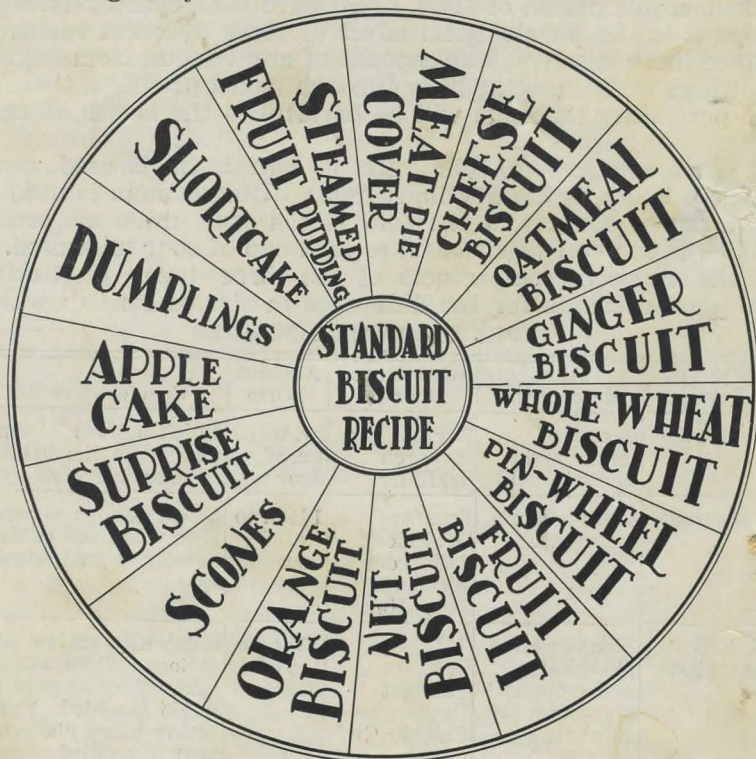
Type of Powder	Acid Component	Well-known Brands	Amount to use	Comparative Action
Tartrate	Cream of tartar and tartaric acid	Royal Monarch Schilling	2 t. to 1 c. of flour	Quick action; action begins when the baking powder is moistened
Phosphate	Mono-calcium phosphate	Rumford's Dr. Price's Red Front Webb's Farm House	1 ½ t. to 1 c. of flour	Quick action; action begins when the baking powder is moistened
S. A. S. phosphate	Mono-calcium phosphate and sodium aluminum sulphate	K. C. O. K. Calumet Davis Clabber Girl	1 ¼ t. to 1 c. of flour	Composite action (double action). Some action takes place as soon as liquid is added. Further action takes place when heat is applied

they are sold and also in amounts recommended in the recipes. Considering pound for pound and amounts used, the difference in prices is almost negligible.

Liquids.—Milk produces best results although satisfactory products are obtained by using water, potato water, or fruit juice. Sour milk or sour cream gives a very tender product and is preferable to sweet milk, especially in making biscuits which are to be used with a fruit mixture such as short cake. This, of course, means freshly soured milk or cream without an unpleasant cheese-like odor.

Shortening.—Tenderness is obtained by the use of fat and careful mixing and handling. The amount of shortening varies according to the kind of biscuits desired. One-third of a cup of shortening to two cups of flour is usually satisfactory, but if more tender and shorter biscuits are desired, this amount may be increased.

Any good, sweet, fresh shortening or combination of shortenings may be used.



STANDARD RECIPE

A standard biscuit dough recipe is easily varied. Many biscuit dough recipes may be developed by varying the proportion of shortening used and by the addition of other ingredients. Since there are so many possible variations from a standard recipe, some knowledge of what constitutes a basic recipe is helpful. Such a recipe is a mixture in which the proportions have been so well worked out that it is recognized as a basis from which to work. The many variations of biscuit dough hold an important place in every meal, whether served as bread, or as part of the main dish in the menu, or as a dessert.

STANDARD BISCUIT RECIPE

Flour	Baking powder
2 c. general purpose flour	4 t. tartrate
or	or
2 2/3 c. pastry flour	3 t. calcium phosphate
(sifted before measuring)	or
1/2 t. salt	2 1/2 t. S.A.S. phosphate
1/3 c. fat	3/4 c. milk (scant)

Combine the sifted dry ingredients and the fat by rubbing them together between the fingers and thumbs or blending with a fork. Turn the milk all at once into the flour-fat mixture and stir vigorously until it thickens (about twenty seconds). Turn the dough onto the lightly floured board and without delay knead it vigorously for twenty seconds. Roll, cut, and bake in a hot oven (425° F.) from 12 to 15 minutes. (Makes 20 biscuits two inches in diameter.)

Variations—

1. Sweet cream biscuits—omit shortening and substitute thin cream for the liquid and shortening.
2. Sour milk biscuits—substitute sour milk or buttermilk for the liquid, decrease baking powder one-half and add 1/2 t. soda.
3. Sour cream biscuits—omit shortening, and for liquid substitute 1/3 c. thick sour cream and 2/3 c. sour milk or buttermilk. The soda and baking powder as in number 2.

MANIPULATION OF INGREDIENTS

1. Measure and sift dry ingredients. Combine the sifted dry ingredients and fat by rubbing them together between fingers and thumb. Two knives, a fork, or a pastry blender may be used for this purpose if desired. When mixed together it has the appearance of coarse cornmeal.

2. Make a well in the center of the fat-flour mixture, then pour in the milk all at once and stir vigorously until it thickens and follows the spoon around the bowl (about 20 seconds).

3. Turn the dough onto a board that is covered with a very thin layer of flour and knead vigorously for 20 seconds. The process of kneading consists of lightly grasping the dough at the opposite side of the board with floured finger tips and folding it over toward oneself and pressing down with the ball of the hand. Turn the ball of dough slightly and knead again. Repeat until the kneading is completed.

4. Shape the dough in a ball and pat out with the hands or roll with a rolling pin to desired thickness ($\frac{1}{2}$ to $\frac{3}{4}$ inch).

5. Cut the dough with a floured biscuit cutter or use a knife and cut the dough into squares. With the latter method very little dough is left over to be reshaped and cut.

6. Bake at 425° F. for about 12 to 15 minutes, or until the crust is an even brown and the inside is dry but light and flaky. A lower temperature dries them out before they are baked.

VARIATIONS WHICH MAY BE MADE WITH ANY ONE OF THE STANDARD BISCUIT RECIPES**1. Cheese Biscuits**

Add $\frac{1}{2}$ c. grated cheese just after working in the shortening and blend well. Proceed as for regular biscuits.

2. Orange Biscuits

Soak loaf of sugar in orange juice and add some grated rind. Press in top of each biscuit just before baking. Two T. of sugar may be included in the dough if desired.

3. Jam Tea Biscuits

Make deep impression in the center of the top of each biscuit. Fill with jam.

4. Pocket Books

Make as for parker house rolls; place a section of orange or loaf of sugar soaked in orange juice between fold of dough.

5. Ginger Biscuits

Chop finely half a cupful candied or crystallized ginger, blend with the fat-flour mixture of biscuit dough. Finish as regular biscuits.

6. Surprise Biscuits

(a) Drop 1 t. dough in each muffin ring. Press a date stuffed with a nut or cheese, etc. Add $\frac{1}{4}$ to $\frac{1}{2}$ marshmallow on top of date, then drop 1 t. dough on top and bake.

(b) Jelly, rhubarb, or orange marmalade, or any desired jam or preserves may be used in the same way.

7. Bismark Breakfast Roll

Roll dough to about $\frac{1}{4}$ inch in thickness, spread with jam, marmalade, jelly, or honey butter, roll as for jelly roll, place in round pan, and slash with scissors.

8. Pin-wheel Biscuits

Roll out dough oblong in shape and about $\frac{1}{4}$ inch in thickness, spread with any of the following, roll as for cinnamon roll, then cut in $\frac{3}{4}$ inch slices.

(a) Spread with butter, sprinkle with brown sugar and cinnamon. Place in a buttered pan or on a mixture of creamed butter and sugar.

(b) Cream 4 T. butter and $\frac{1}{4}$ c. brown sugar (cinnamon if desired). Spread over the dough and cover with $\frac{1}{4}$ c. finely chopped nut meats and raisins.

(c) Spread with orange juice, rind, and sugar.

(d) Spread with butter, sprinkle with brown sugar and cinnamon, cover generously with currants, raisins, citron, or orange peel.

(e) Spread with peanut butter.

(f) Spread with orange marmalade.

(g) Chopped ham, moistened with butter, and horseradish or mustard.

(h) Spread with $\frac{1}{2}$ c. chopped seedless raisins, 1 T. freshly grated orange peel; $\frac{1}{4}$ c. chopped nut meats moistened with jelly or a thick jam.

9. Whole Wheat Biscuits

Substitute whole wheat flour for one-half of the white flour. Add 1 t. brown sugar or honey if desired.

10. Corn Biscuit

Substitute 1 c. flour with 1 c. of corn meal and bake as for plain biscuits.

11. Oatmeal Biscuit

Substitute $\frac{3}{4}$ c. oatmeal for $\frac{1}{2}$ c. white flour.

12. Nut Biscuits

Add 1 T. sugar to dry ingredients, then add $\frac{1}{2}$ c. chopped nut meats to the fat-flour mixture. If desired use whole wheat biscuit dough.

13. Fruit Biscuits

Substitute whole wheat flour for one-half of the flour; add 2 T. brown sugar. Add $\frac{1}{2}$ c. chopped dates, raisins, or currants to the fat-flour mixture.

14. Orange Marmalade Biscuit

Use basic biscuit recipe adding only 4 T. milk. Combine milk with 1 egg well beaten and $\frac{1}{3}$ c. orange marmalade and proceed as for plain biscuits. When nearly done brush tops with melted butter and finish baking.

15. Drop Biscuits

To the basic recipe add about 2 T. more liquid. Stir dough vigorously in bowl twice as long as usual, then drop by spoonfuls on a baking sheet.

16. Cream Drop Biscuits

Omit shortening and liquid and use $\frac{2}{3}$ c. of heavy cream and $\frac{1}{4}$ c. milk. Add 1 T. sugar.

17. Scones

Use basic biscuit recipe adding 2 T. sugar, $\frac{1}{2}$ c. seedless raisins, and the grated rind of $\frac{1}{2}$ orange. Roll out to $\frac{1}{2}$ inch in thickness, cut in $2\frac{1}{2}$ inch triangles. Bake 15 minutes, then brush with beaten egg yolk and sprinkle with sugar or with equal parts of sugar and milk. Continue baking until scones are done.

18. Quick Coffee Cake

Add 6 T. sugar to dry ingredients of basic biscuit recipe and 2 eggs well beaten to liquid. Turn into greased pan, spread the top with butter, then sprinkle with a mixture of $\frac{3}{4}$ c. cracker or bread crumbs, 2 T. sugar, $\frac{3}{4}$ t. cinnamon, and 2 T. melted butter. Bake in hot oven (400°) for 45 minutes.

19. Dumplings for Stew

Omit shortening from biscuits and use a little more liquid and drop by spoonfuls.

MEAT AND VEGETABLE BISCUIT PIES**MEAT PIE**

Use basic biscuit dough recipe. Roll the dough to fit the top of casserole; pierce with a fork. Place over the dish of left-over meats and gravy and bake until brown.

CHICKEN PIE

Cut a medium-sized fowl into pieces, cover with salted boiling water and cook until very tender. Cool slightly and remove the meat from the bones in large pieces. Thicken the



broth (some milk or cream may be added) with a flour paste and add the meat. Some cooked celery or green pepper may be added or a combination of cooked ham and chicken.

Pour the mixture into a deep baking dish or pan and heat to boiling. Prepare a biscuit dough, using any of the basic recipes. The crust made with a beaten egg added is particularly nice with fowl. Roll to $\frac{1}{4}$ inch in thickness and to

fit the top of the meat mixture, or cut into circles or as for doughnuts, and place on top of meat. It may be brushed with melted butter or milk to insure a nice brown. Place in a hot oven of 450° to 475° F. and bake 20 to 25 minutes. Serve hot.

VEGETABLE SHORT CAKE

1 c. cooked diced carrots	1 c. cooked diced potatoes
1 c. cooked peas	2½ c. medium white sauce

Make white sauce, add to cooked vegetables and heat together until vegetables are hot, then prepare same as for chicken pie. Left-over vegetables may be combined and served in this manner.

ONION SHORT CAKE

Filling

8 to 10 medium sized white onions	½ of a slightly beaten egg
½ t. salt	¾ to 1 c. thick cream (either sour or sweet)
3 T. butter	

Sprinkle the onions with salt and place in a frying pan in which the butter has been melted. Cover and simmer, stirring occasionally, until the onions are very tender but not browned. Let cool while preparing the short cake.

Short Cake

1 c. flour	2 t. tartrate
½ t. salt	or
1½ T. shortening	1½ t. calcium phosphate
⅓ c. milk	or
½ of a slightly beaten egg	1¼ t. S.A.S. phosphate
Baking powder	

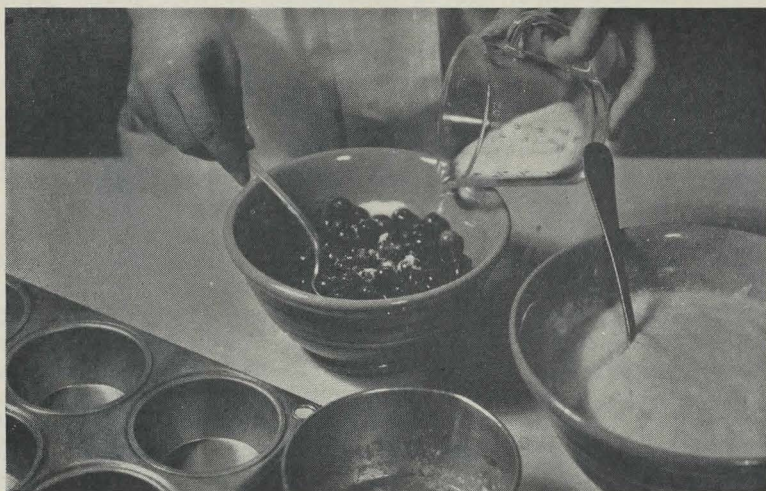
Sift the dry ingredients together. Work in the shortening. Combine the milk and beaten egg and add to the dry ingredients, stirring only until mixed. Spread in a deep, greased pie tin and cover with the cooked onions. Mix the remaining ½ egg with the cream and pour over the layer of onions. Place in a hot oven (425° F.) and bake 25 minutes, or until short cake is done. Serve hot.

DESSERTS

COBBLER

(Cherry, Apple, or Peach)

Use basic biscuit recipe. Roll about $\frac{2}{3}$ of the dough and cut into strips and fit around the edge of the pan. Roll the remaining dough to $\frac{1}{4}$ of an inch in thickness, cut with a sharp knife slits to permit escape of steam. Fit over pan which is filled with fruit; press edges of dough together with fork. Bake about 30 minutes. Sprinkle powdered sugar over top.



FRUIT FILLING FOR COBBLER

Apple: Choose tart flavored apples that cook well but hold their shape. Wash, pare, and slice them. Add 1 c. sugar, $\frac{1}{2}$ t. cinnamon, 2 T. butter and 1 t. vinegar or lemon juice to 4 c. sliced apples.

Peach: $2\frac{1}{2}$ c. canned peaches (drained), 1 c. juice, 1 T. lemon juice, 2 T. butter, 3 T. flour or tapioca, $\frac{1}{3}$ c. sugar, $\frac{1}{4}$ t. nutmeg.

Cherry: 3 c. sour red cherries (drained and pitted), 1 c. juice, 2 T. butter, $\frac{3}{4}$ c. sugar, 3 T. flour or tapioca.

DUTCH APPLE CAKE

To basic recipe add $\frac{1}{2}$ to $\frac{3}{4}$ c. sugar and 1 egg to the liquid. Spread dough in a shallow bread pan and brush over with melted butter. Press apples into the dough points down, or place slices flat on dough. Sprinkle with cinnamon and sugar. Bake 25 to 30 minutes in hot oven. Serves six.

APPLE OR PEACH DUMPLINGS

Use sour milk or sour cream dough, roll $\frac{1}{4}$ inch thick, cut in squares and wrap around sections of apple or peach. Bake until fruit is cooked. Serve with cream or with the following sauce:

1 c. brown sugar	2 T. butter
2 T. flour	1 T. lemon juice
$\frac{1}{2}$ t. salt	1 c. water

Mix and cook sugar, flour, salt, and water until it thickens, stirring constantly. Cool slightly, add butter and lemon juice. Serve warm.

FRUIT ROLL

(a) Mix 1 c. sugar (either brown or white) with $\frac{3}{4}$ c. of water and boil to a thin sirup. Butter generously a deep square pan, measuring about 8 x 13 inches. Pour in the sirup and let cool while preparing a biscuit dough. Roll about $\frac{1}{3}$ inch in thickness, brush lightly with melted butter, and spread with 2 c. chopped apples (quick-cooking variety). Sprinkle generously with sugar. Roll like jelly roll and cut into $\frac{1}{4}$ inch slices. Place side by side in the sirup and bake in a hot oven of 425° F. for 15 minutes, then reduce the heat and bake 10 minutes. Serve warm with warm cream to which a little sugar and cinnamon have been added.

(b) Substitute cherries for apples and make sirup with cherry juice instead of water. The sirup may be served over roll as a sauce if desired.

(c) Substitute mincemeat for apples in (a).

SHORT CAKE

Use basic recipe, add small amount of sugar if desired. Roll to $\frac{1}{4}$ inch thickness, fit into a pan or cut into circles. Butter tops of half of the shapes, place remaining shapes on top, and bake. When baked split and put fruit between pieces and over tops.

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